

PREV PACKAGE NEXT PACKAGE

FRAMES NO FRAMES

# Package com.gepower.sfo.tool.ldap

Interface Summary		
Directory Manager	DirectoryManager provides an interface for accessing Directory data.	
<b>DirectorySource</b>	DirectorySource is an interface which provides access to Directory data sources.	

Class Summary	
<b>DefaultDirectorySource</b>	DirectorySource implementation.
<u>DirectoryEntry</u>	Represents an LDAP Directory Entry and a LDAP invocation handler used in Proxy instances.
<u>DirectoryManagerFactory</u>	Use to create an object which implements the DirectoryManager interface.
Generator	Generates java interfaces which represents LDAP object classes.

Overview Package Class Tree Deprecated Index Help

PREV PACKAGE NEXT PACKAGE

FRAMES NO FRAMES





PREV PACKAGE NEXT PACKAGE

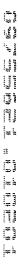
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Overview	Package	Class	Tree	<b>Deprecated</b>	<u>Index</u>	<u>Help</u>		
PREV PACKAGE	NEXT PACKA	GE					FRAMES	NO FRAMES







PREVICLASS NEXT CLASS
SUMMARY: INNER | FIELD | CONSTR | METHOD

FRAMES NO FRAMES
DETAIL: FIELD | CONSTR | METHOD

com.gepower.sfo.tool.ldap

# Interface DirectoryManager

public interface DirectoryManager

Dire oryManager provides an interface for accessing Directory data.

Method Su	ımmary
java.laduslinest	cast(java.lang.Object entry, java.lang.Class interfaceToCastTo) This method provides backward compatibility from Java 1.3 to Java 1.2 which does not support the Proxy class.
java.lang.Strind	getDN (java.lang.Object entry) Use to get the specified 'entry' distinquished name.
java.lang.Osjest	lookup (java.lang.String dn)  Use to lookup a specific entry identified by the specified 'dn'
java.lang.lunest	<u>mixinInterfaces</u> (java.lang.Object entry, java.lang.Class[] newInterfaces)  Use to add additional interfaces specified by 'newInterfaces' to an existing 'entry'.
javaang.lojest	<pre>newEntryInstance(java.lang.String dn, java.lang.Class[] interfaces) Use to create a new LDAP entry.</pre>
. 1.4	remove (java.lang.Object entry) Use to remove an existing entry from the Directory.
revalutiLibr	<pre>search(java.lang.String ctxToSearch, java.lang.String filter) Use to execute a query against the Directory using the specified 'ctxToSearch', and 'filter'.</pre>
hava.util.List	<pre>search(java.lang.String ctxToSearch, java.lang.String filter, javax.naming.directory.SearchControls searchCtrls)     Use to execute a query against the Directory using the specified 'ctxToSearch', 'filter', and 'searchCtrls.</pre>
javalutši.List	<pre>search(java.lang.String ctxToSearch, java.lang.String filter, j= ax.naming.directory.SearchControls searchCtrls, javax.naming.ldap.Control [] reqCtrls)</pre>





write(java.lang.Object entry)

Use to commit a new entry or modifications of an existing entry to the Directory.

# Method Detail

## newEntryInstance

Use to create a new LDAP entry. The entry is not written to the Directory until DirectoryManager.write() is executed.

#### Parameters:

dn - Distinquished name for the new entry. Must not be null or empty.

interfaces - Array of Class objects which represent the interfaces that this new entry will support. The Class objects MUST be one of the LDAP code generated interfaces. Array must not be null or empty.

#### Returns:

Object representing the directory entry. This object can be cast to the appropriate "objectclass" interface (s).

## Throws:

javax.naming.NamingException - if a naming exception is encountered.

## mixinInterfaces

```
.blic java.lang.Object mixinInterfaces(java.lang.Object entry, java.lang.Class[] newInterfaces)
throws javax.naming.NamingException
```

Use to add additional interfaces specified by 'newInterfaces' to an existing 'entry'. The modified entry is not written to the Directory until DirectoryManager.write() is executed.

## Parameters:

entry - Existing LDAP entry to mix new interfaces into. 'entry' must be acquired by calls to DirectoryController.lookup(), DirectoryController.search(), or DirectoryController.newEntryInstance(). newInterfaces - Array of new interfaces to mix into the entry. Must not be null and must not be empty.

## Returns:

Object representing the modified directory entry. This object can be cast to the appropriate "objectclass" interface(s) including those contained in 'newInterfaces'.

## Throws:

javax.naming.NamingException - if a naming exception is encountered.

## lookup





Use to lookup a specific entry identified by the specified 'dn'.

## Parameters:

dn - The distinquished name which uniquely identifies the entry. Must not be null and must not be empty

## Returns:

Object representing the directory entry bound to the specified dn. This object can be cast to the appropriate "objectclass" interface(s).

## Throws:

```
javax.naming.NameNotFoundException - if dn cannot be resolved because it is not bound javax.naming.NamingException - if a naming exception is encountered. java.lang.ClassNotFoundException - if the looked up entry contains an object class which does :...t have an associated code generated interface.
```

## search

Use to execute a query against the Directory using the specified 'ctxToSearch', and 'filter'.

## Parameters:

GTMToSearch - Context to search. "" for current context. Must not be null. filter - LDAP search filter. Must not be null.

#### Returns:

List of Objects representing the results of the search. These Object can each be cast to the appropriate "objectclass" interface(s). If search finds nothing, List returned will have size of zero. Return will never be null.

#### Throws:

java.lang.ClassNotFoundException - if the entries found contains an object class which does not have an associated code generated interface.

javax.naming.NamingException - if naming exception is encountered.

## search



Use to execute a query against the Directory using the specified 'ctxToSearch', 'filter', and 'searchCtrls.

## Parameters:

ctxToSearch - Context to search. "" for current context. Must not be null.

filter - LDAP search filter. Must not be null.

searchCtrls - Used to determine scope of search and what gets returned. May be null. If null, defaults will be used (search using SearchControls SUBTREE\_SCOPE).

## Returns:

List of Objects representing the results of the search. These Object can each be cast to the appropriate "objectclass" interface(s). If search finds nothing, List returned will have size of zero. Return will never be null.

## Throws:

java.lang.ClassNotFoundException - if the entries found contains an object class which does not have an associated code generated interface.

javax.naming.NamingException - if naming exception is encountered.

## See Also:

SearchControls

## search

Use to execute a query against the Directory using the specified 'ctxToSearch', 'filter', 'searchCtrls, and 'reqCtrls'.

## Parameters:

CTMToSearch - Context to search. "" for current context. Must not be null.

filter - LDAP search filter. Must not be null.

searchCtrls - Used to determine scope of search and what gets returned. May be null. If null, defaults will be used (search using SearchControls.SUBTREE\_SCOPE).

reqCtrls - A control to request the LDAP search to return in a certain way (i.e, sort results in a particular way). May be null. If null, no LDAP request controls will be used.

## Returns:

List of Objects representing the results of the search. These Object can each be cast to the appropriate "objectclass" interface(s). If search finds nothing, List returned will have size of zero. Return will never be null.

#### Throws:

java.lang.ClassNotFoundException - if the entries found contains an object class which does not have an associated code generated interface.

javax.naming.NamingException - if naming exception is encountered.

## See Also:

SearchControls, Control

## write

Use to commit a new entry or modifications of an existing entry to the Directory.

## Parameters:

Entry to commit to the directory, 'entry' must have been acquired by calls to DirectoryController.lookup(), DirectoryController.search(), or DirectoryController.newEntryInstance() Must not be null.

## Throws:

javax.naming.NamingException - if naming exception is encountered.

#### remove

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Use to remove an existing entry from the Directory.

## Parameters:

entry - Entry to remove from the directory. 'entry' must have been acquired by calls to DirectoryController.lookup(), DirectoryController.search(), or DirectoryController.newEntryInstance() Must not be null.

#### Throws:

javax.naming.NamingException - if naming exception is encountered.

## cast

This method provides backward compatibility from Java 1.3 to Java 1.2 which does not support the Proxy class. This method is not yet implemented.

## Parameters:

entry - Entry to cast. 'entry' must have been acquired by calls to DirectoryController.lookup(), DirectoryController.search(), or DirectoryController.newEntryInstance(). Must not be null. interfaceToCastTo - This is the interface that the specified 'entry' is to be cast to.

#### Returns:

Object which can be cast to the type specified by 'interfaceToCastTo'.

## Throws:

java.lang.ClassCastException - if the specified 'entry' cannot be cast to the specified





'interfaceToCastTo'.

## getDN

public java.lang.String getDN(java.lang.Object entry)

Use to get the specified 'entry' distinquishe : name.

## Parameters:

entry - Entry to obtain distinquished name from 'entry' must have been acquired by calls to DirectoryController.lookup(), DirectoryController.search(), or DirectoryController.newEntryInstance(). Must not be null.

## Returns:

String containing the specified 'entry' distinguished name.

# Overview Package Class Tree Deprecated Index Help

PREV CLASS NEXT CLASS
SUMMARY: INNER; FIELD | CONSTR | METHOD

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DETAIL: FIELD | CONSTR | METHOD

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DETAIL: FIELD | CONSTR | METHOD

com.gepower.sfo.tool.ldap

# Class DefaultDirectorySource

java.lang.Object

+--com.gepower.sfo.tool.ldap.DefaultDirectorySource

## All Implemented Interfaces:

**DirectorySource** 

public class **DefaultDirectorySource** extends java.lang.Object implements DirectorySource

DirectorySource implementation. See DirectorySource for discription of implemented methods.

# **Constructor Summary**

<u>DefaultDirectorySource</u>(java.util.Hashtable environment)

# Method Summary

V013	discardDirContext (javax.naming.directory.DirContext context)  Use to discard the specified 'context'
javaminaming, širettory.lirContext	getDirContext() Use to get a JNDI DirContext object.
t 16.h	<u>releaseDirContext</u> (javax.naming.directory.DirContext context)  Use to release the specified 'context'.

## Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

# **Constructor Detail**





## **DefaultDirectorySource**

## **Method Detail**

## getDirContext

## Description copied from interface: DirectorySource

Use to get a JNDI DirContext object.

## Specified by:

getDirContext in interface DirectorySource

Following copied from interface: com.gepower.sfo.tool.ldap.DirectorySource

## Returns:

DirContext object.

## Throws:

javax.naming.NamingException - if a naming exception is encountered.

## releaseDirContext

public void releaseDirContext(javax.naming.directory.DirContext context)

## Description copied from interface: DirectorySource

Use to release the specified 'context'. This should be called when the context is no longer needed. Specified by:

releaseDirContext in interface DirectorySource

Following copied from interface: com.gepower.sfo.tool.ldap.DirectorySource

## Parameters:

context - The context to release.

## discardDirContext

public void discardDirContext(javax.naming.directory.DirContext context)

## Description copied from interface: DirectorySource

Use to discard the specified 'context'.

## Specified by:

discardDirContext in interface DirectorySource





Following copied from interface: com.gepower.sfo.tool.ldap.DirectorySource Parameters:

context - The context to release.

# Overview Package Class Tree Deprecated Index Help

PREV CLASS NEXT CLASS
SUMMARY INNER! FIELD | CONSTR | METHOD

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SUMMARY INNER! FIELD | CONSTR | METHOD

FRAMES NO FRAMES
DETAIL: FIELD | CONSTR | METHOD

com.gepower.sfo.tool.ldap

# Class DirectoryEntry

## All Implemented Interfaces:

java.lang.reflect.InvocationHandler, java.io.Serializable

## public class DirectoryEntry

extends java lang Object

implements java.io. Serializable, java.lang.reflect.InvocationHandler

Represents an LDAP Directory Entry and a LDAP invocation handler used in Proxy instances. Each proxy instance has an associated invocation handler. When a method is invoked on a proxy instance, the method invocation is encoded and dispatched to the invoke method of its invocation handler. This is a package scope class and not used directly by clients.

## See Also:

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InvocationHandler, java.lang.reflect.Proxy, Serialized Form

# Method Summary [ava.lang.lejert | invoke (java.lang.Object proxy, java.lang.reflect.Method method, java.lang.Object[] args) [Implement abstract method invoke() from InvocationHandler. [ava.lang.lejert | tostring (java.lang.Object proxy, java.lang.reflect.Method method) Returns the contents of all attribute in this entry.

## Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## **Method Detail**





## invoke

Implement abstract method invoke() from InvocationHandler. This method only recognizes methods that have been declared in the generated interfaces.

## Specified by:

invoke in interface java.lang.reflect.InvocationHandler

#### Parameters:

proxy - the proxy instance that the method was invoked on.

method - the Method instance corresponding to the interface method invoked on the proxy instance. The declaring class of the Method object will be the interface that the method was declared in, which may be a superinterface of the proxy interface that the proxy class inherits the method through.

args - an array of objects containing the values of the arguments passed in the method invocation on the proxy instance, or null if interface method takes no arguments. Arguments of primitive types are wrapped in instances of the appropriate primitive wrapper class, such as java lang. Integer or java lang. Boolean.

## Throws:

java.lang.Throwable - the exception to throw from the method invocation on the proxy instance. The exception's type must be assignable either to any of the exception types declared in the throws clause of the interface method or to the unchecked exception types java.lang.RuntimeException or java.lang.Error. If a checked exception is thrown by this method that is not assignable to any of the exception types declared in the throws clause of the interface method, then an UndeclaredThrowableException containing the exception that was thrown by this method will be thrown by the method invocation or 'he proxy instance.

## See Also:

```
java.lang.reflect.UndeclaredThrowableException
```

## toString

Returns the contents of all attribute in this entry. Use for debugging purposes only.

## Parameters:

proxy - The Proxy object serviced by this InvocationHandler. method - The Method object invoked on the Proxy.

## Returns:

The contents of all attributes in this entry.





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SUMMARY: INNER | FIELD | CONSTR | METHOD

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SUMMARY INNER | FIELD | CONSTR | METHOD

FRAMES NO FRAMES
DETAIL: FIELD | CONSTR | METHOD

com.gepower.sfo.tool.ldap

# Class Directory Manager Factory

public class **DirectoryManagerFactory** extends java.lang.Object

Use to create an object which implements the DirectoryManager interface.

# **Constructor Summary**

DirectoryManagerFactory()

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# Method Summary

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statio <u>livett villanager</u>	newDirectoryManager (DirectorySource src, java.lang.String pkg)  Creates a new object which implements the DirectoryManager interface using the specified 'src' and 'pkg'.				
static <u>licecticy/denager</u>	newDirectoryManager (DirectorySource src, java.lang.String pkg, java.lang.ClassLoader loader)  Creates a new object which implements the DirectoryManager interface using the specified 'src', 'pkg', and 'loader'.				
statio <u>TurkotyrManager</u>	newDirectoryManager (DirectorySource src, java.lang.String pkg, java.lang.ClassLoader loader, java.io.PrintStream logger)  Creates a new object which implements the DirectoryManager interface using the specified 'src', 'pkg', 'loader', and 'logger'.				
Static <u>HotopyManager</u>	newDirectoryManager (java.util.Hashtable env, java.lang.String pkg)  Creates a new object which implements the DirectoryManager interface using the specified 'env' and 'pkg'.				





static <u>CirecticyManager</u>	newDirectoryManager(java.util.Hashtable env, java.lang.String pkg,
	java.lang.ClassLoader loader)  Creates a new object which implements the DirectoryManager interface using the specified 'env', 'pkg', and 'loader'.
	<pre>newDirectoryManager(java.util.Hashtable env, java.lang.String pkg, java.lang.ClassLoader loader, java.io.PrintStream logger:</pre>

## Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## **Constructor Detail**

## **DirectoryManagerFactory**

public DirectoryManagerFactory()

## **Method Detail**

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## newDirectoryManager

Creates a new object which implements the DirectoryManager interface using the specified 'env' and 'pkg'. **Parameters:** 

env - Used to specify various preferences and properties that define the environment in which naming and directory services are accessed. Must not be null.

pkg - The java package in which the LDAP interfaces were generated under. Must not be null.

## Throws:

```
java.lang.IllegalArgumentException - if 'env' or 'pkg' is null.
javax.naming.NamingException - if a naming exception is encountered.
```

## newDirectoryManager



javax.naming.NamingException

Creates a new object which implements the DirectoryManager interface using the specified 'env', 'pkg', and 'loader'.

## Parameters:

env - Used to specify various preferences and properties that define the environment in which naming and directory services are accessed. Must not be null.

pkg - The java package in which the LDAP interfaces were generated under. Must not be null loader - Class loader to use to load proxy classes. May be null in which case the current threads class loader will be used.

## Throws:

```
java.lang.IllegalArgumentException - if 'env' or 'pkg' is null. javax.naming.NamingException - if a naming exception is encountered.
```

## newDirectoryManager

Creates a new object which implements the DirectoryManager interface using the specified 'env', 'pkg', 'loader', and 'logger'.

## Parameters:

env - Used to specify various preferences and properties that define the environment in which naming and directory services are accessed. Must not be null.

pkg - The java package in which the LDAP interfaces were generated under. Must not be null loader - Class loader to use to load proxy classes. May be null in which case the current threads class loader will be used.

logger - This is where all debug trace messages will be written to.

## Throws:

```
java.lang.IllegalArgumentException - if 'env' or 'pkg' is null. javax.naming.NamingException - if a naming exception is encountered.
```

## newDirectoryManager

Creates a new object which implements the DirectoryManager interface using the specified 'src' and 'pkg'.

Parameters:

src - Specifies the what directory source the DirectoryManager will use. Must not be null.





pkg - The java package in which the LDAP interfaces were generated under. Must not be null.

## Throws:

```
java.lang.IllegalArgumentException - if 'src' or 'pkg' is null. javax.naming.NamingException - if a naming exception is encountered.
```

## newDirectoryManager

Creates a new object which implements the DirectoryManager interface using the specified 'src'. 'pkg'. and 'loader'.

## Parameters:

src - Specifies the what directory source the DirectoryManager will use. Must not be null.

pkg - The java package in which the LDAP interfaces were generated under. Must not be null.

loader - Class loader to use to load proxy classes. May be null in which case the current threads class loader will be used.

## Throws:

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```
java.lang.IllegalArgumentException - if 'src' or 'pkg' is null: javax.naming.NamingException - if a naming exception is encountered.
```

## newDirectoryManager

Creates a new object which implements the DirectoryManager interface using the specified 'src', 'pkg', 'loader', and 'logger'.

## Parameters:

```
src - Specifies the what directory source the DirectoryManager will use. Must not be null.
```

pkg - The java package in which the LDAP interfaces were generated under. Must not be null.

loader - Class loader to use to load proxy classes. May be null in which case the current threads class loader will be used.

logges - This is where all debug trace messages will be written to.

## Throws:

```
java.lang.IllegalArgumentException - if 'src' or 'pkg' is null. javax.naming.Nam_ngException - if a naming exception is encountered.
```





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SUMMARY: INNER | FIELD | CONSTR | METHOD

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22 5

FRAMES NO FRAMES

DETAIL: FIELD | CONSTR | METHOD





PREVICUASS NEXT CLASS
SUMMARY: INNER! FIELD | CONSTR | METHOD

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DETAIL: FIELD | CONSTR | METHOD

com.gepower.sfo.tool.ldap

## Class Generator

public abstract class Generator extends java lang Object

Generates java interfaces which represents LDAP object classes. These classes are used in the java LDAP Directory framework. This class is abstract can contains only static methods. This class contains a main() method and is designed to be executed from the command line. See method description for main() for more details.

See Also:

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main(java.lang.String[])

# **Constructor Summary**

Generator()

# **Method Summary**

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main(java.lang.String[] args)

Usage: java com.gepower.sfo.tool.ldap.Generator params [options]

## Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

# Constructor Detail

## Generator

public Generator()





# Method Detail

## main

public static void main(java.lang.String[] args)

Usage: java com.gepower.sfo.tool.ldap.Generator params [options]

To print out help, use the -help option when executing this program from the command line.

## Parameters:

args - Array of String arguments which consists of the required and optional parameters.

## Required Parameters:

- '-sourcerootpath' the root directory path for the generated java source
- '-package' the java package for the generated java source
- '-diretxfactory' class to use for the initial directory context factory.
- '-providerurl' the LDAP URL string (i.e., ldap://localhost:389/o=ge.com).
- '-securityprincipal' identity of the principal for authenticating the caller to the service.
- '-securitycredentials' credentials of the principal for authenticating the caller to the service
- '-securityauthentication' security level to use.

## Optional Parameters:

- '-exclude' object classes matching the wildcard will be excluded from code generation. Exclusions have precedence over Inclusion. Multiple wildcards can be specified separated by semi-colons. (i.e. "ns\*, ob\*, net\*server").
- '-include' object classes matching the wildcard will be included in code generation. If option not specified, include all object classes. Multiple wildcards can be specified, see exclude option.
- '-version' version number that will be included into the javadoc of the generated code.
- '-tabstop' tab stop to use when formatting the generated code.
- '-help' use to print usage syntax on the command line
- '-?' use to print usage syntax on the command line.

# Overview Package Class Tree Deprecated Index Help

PREVICUASS NEXT CLASS
SUMMARY: INNER | FIELD | CONSTR | METHOD

FRAMES NO FRAMES
DETAIL: FIELD | CONSTR | METHOD